CLAIMS

1. (Original) A circuit comprising:

an amplifier coupled to a fixed-level DC voltage source;

a bias circuit coupled to the amplifier, wherein the bias circuit receives a continuously-varying first voltage signal reflective of an output power level of a signal to be output by the amplifier, and based on the first voltage signal causes the amplifier to draw a quiescent current from the voltage source that varies proportionally with the first voltage signal.

2. (Original) The circuit of claim 1, wherein the bias circuit comprises a resistor T-network.

3. (Original) The circuit of claim 2, wherein the bias circuit comprises a current mirror coupled to the resistor T-network.

4. (Original) The circuit of claim 3, wherein the bias circuit is coupled to the amplifier in a current mirror.

5. (Original) The circuit of claim 1, wherein the bias circuit is coupled to the amplifier in a current mirror.

6. (Original) The circuit of claim 2, wherein a subportion of the bias circuit and the amplifier are together on a single integrated circuit, but the resistor T-network is not on the single integrated circuit.

7. (Original) The circuit of claim 3, wherein the bias circuit is coupled to the amplifier in a current mirror.

8. (Original) The circuit of claim 3, wherein the current mirror and the amplifier are together on a single integrated circuit, but the resistor T-network is not on the single integrated circuit.

9. (Original) The circuit of claim 1, wherein bias circuit comprises a conversion circuit that shifts the voltage of the first voltage signal and converts the first voltage signal to a proportional current, and a current multiplier that multiplies the current into the amplifier as the quiescent current.

10. (Original) The circuit of claim 1, wherein the bias circuit generates a current that varies proportionally with the first voltage signal.

11. (Original) The circuit of claim 6, wherein the quiescent current includes a constant current portion in addition to a continuously-varying portion.

12. (Original) The circuit of claim 1, wherein a transistor of the bias circuit is in a current mirror with a transistor of the amplifier, the current mirror having a non-unity current mirror ratio.

13. (Original) A circuit comprising:

an amplifier comprising a first transistor, wherein a collector of the first transistor receives a continuously-varying quiescent current from a fixed-level DC voltage source, and a base of the transistor receives a RF signal to be amplified by the amplifier; and

a bias circuit, wherein the bias circuit comprises a second transistor that is in a current mirror with the first transistor, wherein the quiescent current is a mirror of a current through the first transistor.

14. (Original) The circuit of claim 13, wherein the current mirror has a current mirror ratio such that the quiescent current is greater than the current through the second transistor.

15. (Original) The circuit of claim 13, wherein the bias circuit receives a continuously-varying voltage signal, and the quiescent current varies proportionally with the voltage signal.

16. (Original) The circuit of claim 15, wherein the bias circuit includes a plurality of current mirror circuits.

17. (Original) The circuit of claim 13, wherein the bias circuit comprises a resistor T-network.

18. (Original) The circuit of claim 17, wherein the bias circuit comprises a current mirror coupled to the resistor T-network.

19. (Original) The circuit of claim 17, wherein the amplifier and a portion of the bias circuit, including the second transistor, are together on a single integrated circuit, but the resistor T-network is not on the single integrated circuit.

20. (Original) The circuit of claim 13, wherein bias circuit comprises a conversion circuit that shifts the voltage of the first voltage signal and converts the first voltage signal to a proportional current, and the amplifier and a portion of the bias circuit, including the second transistor, are together on a single integrated circuit, but the conversion circuit is not on the single integrated circuit.

21. (Original) A wireless communication device comprising:

an amplifier that receives and amplifies a RF signal to be broadcast by the wireless communications device, said amplifier coupled to a fixed-level DC voltage source;

a baseband processor that outputs an analog voltage signal indicative of an output power of the RF signal to be broadcast by the wireless communication device; and

a bias circuit coupled to the amplifier, wherein the bias circuit receives the analog voltage signal and causes the amplifier to draw a quiescent current from the voltage source, and said quiescent current varies proportionally with the analog voltage signal.

22. (Original) The wireless communication device of claim 21, wherein the bias circuit includes a resistor T-network that receives the analog voltage signal, and a current mirror coupled to the resistor T-network.

23. (Original) The wireless communication device of claim 21, wherein the bias circuit is coupled to the amplifier in a current mirror, the current mirror including a first transistor of the bias circuit and a second transistor of the amplifier, and the RF signal amplified by the amplifier is received by the amplifier at a base of the second transistor.

24. (Original) The wireless communication device of claim 21, further comprising a preamplifier that receives the RF signal, amplifies the RF signal, and outputs the RF signal to the amplifier, wherein the preamplifier receives the analog control voltage from the baseband processor, and an amount of the amplification by the preamplifier is controlled by the analog control signal.

25. (Original) The wireless communication device of claim 24, further comprising a modulator circuit coupled between the baseband processor and the preamplifier, wherein the modulator circuit receives an encoded data signal from the baseband processor, modulates the data signal to produced the RF signal, and provides the RF signal to the preamplifier.

26. (Original) The wireless communication device of claim 21, wherein bias circuit comprises a conversion circuit that shifts the voltage of the first voltage signal and converts the first voltage signal to a proportional current, and the amplifier and a portion of the bias circuit, including the second transistor, are together on a single integrated circuit, but the conversion circuit is not on the single integrated circuit.

27. (Original) A wireless communication device comprising:

an amplifier that receives and amplifies a RF signal to be broadcast by the wireless communications device, said amplifier coupled to a fixed-level DC voltage source;

a bias circuit coupled to the amplifier, wherein the bias circuit receives an analog voltage signal, and causes the amplifier to draw a quiescent current that varies proportionally with the analog voltage signal from the voltage source.

28. (Original) The wireless communication device of claim 27, wherein the analog voltage signal, reflects a power of the RF signal to be broadcast by the wireless communications device.

29. (Original) The wireless communication device of claim 27, wherein the quiescent current includes a constant current portion and an analog current portion that varies proportionally with the analog voltage signal.

30. (Original) The wireless communication device of claim 27, wherein the bias circuit is coupled to the amplifier in a current mirror.

31. (Original) The wireless communication device of claim 27, further comprising a baseband processor, wherein the baseband processor outputs the analog voltage signal to the bias circuit, and outputs a data signal upon which the RF signal is based.

32. (Original) A method of operating an amplifier, comprising:

generating a continuously-varying voltage signal; providing a first signal to an amplifier, wherein the amplifier amplifies the first signal and outputs the first signal at an output power level reflective of the voltage signal; and

biasing the amplifier with a quiescent current that varies proportionally with the voltage signal.

33. (Original) The method of claim 32, wherein the first signal originates from a baseband processor that also outputs the continuously-varying voltage signal, and the first signal is broadcast through an antenna after the amplification.

34. (Original) A method of operating a wireless communications device comprising:

generating a data signal and an analog voltage signal in the wireless communications device;

forming a RF signal from said data signal; amplifying the RF signal in an amplifier of the wireless communications device; and

outputting the amplified RF signal from the amplifier to an antenna of the wireless communications device for broadcasting, wherein the amplifier is biased with a current from a fixed DC voltage source, said current varies proportionally with the analog voltage signal, and a power level of the RF signal output by the amplifier to the antenna is reflective of the analog voltage signal.

35. (Original) The method of claim 34, further comprising providing the, RF signal to a preamplifier, amplifying the RF signal in the preamplifier to a power level based on the analog voltage signal, and outputting the amplifier RF signal from the preamplifier to the amplifier.